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FALL OUTLOOK FOR 1956 IRRIGATION WATER SUPPLY
FOR COLUMBIA BASIN IN UNITED STATES^{1/}
by: Soil Conservation Service

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The outlook now for next year's water supply in Washington and Montana, so far as it can be foreseen at this early date, is good. There are no water shortage areas currently foreseen due either to lack of reservoir carryover or to unusual soil moisture deficiency. If winter mountain snowpack this season proves normal or nearly so, Washington and Montana should experience another year of adequate water supply.

Five main irrigation reservoirs in Washington now hold water to 53% of capacity. This is 23% greater than the 10-year (1943-52) average holdover, thus providing a substantial "back log" water starter for next season.

Irrigation supplies this past season in Washington and Montana were satisfactory and substantially as forecasted from the earlier snow surveys.

Elsewhere in U.S. parts of Columbia Basin the prospects for next season's water supply can be only partially foreseen at this time. However, the past two years of scanty snowfall have resulted in accumulated deficiencies of water both in the soils of the watersheds and in the reservoirs.

The outlook in northern Idaho is for near normal supplies of water in general. In southern Idaho watershed soil moisture is deficient. In contrast to their usual flows, some small spring-fed streams at high altitudes are dry. Reservoir storage in general is low. Mountain snowpack well above average will be required if a normal water year is to be in prospect next April for southern Idaho in 1956.

^{1/} Statement prepared for October 1955 meeting of Water Management Sub-Committee of CBIAC.

October 1 storage in five principal Idaho irrigation reservoirs stood at 17% of capacity as compared to the 10-year average of 40%.

Reservoirs on the main stem of the Snake river of southern Idaho are lower than they have been since 1940. Some smaller but important reservoirs in southern Idaho are empty. Irrigation in 1956 in such cases will be entirely dependent on the precipitation and snowfall occurring from now until next spring.

In Oregon, water stored in 24 representative reservoirs, a majority being in Columbia Basin, is 63% of average and materially less than last year. Current storage is only 26% of capacity, whereas normally it equals 41% capacity at this time of year. Owyhee reservoir is record low with contents of 60,000 acre feet. Unity reservoir holds the least water since constructed. The Vail-Oregon District ceased water delivery August 29. The Warm Springs District exhausted its water by August 15. Both McKay and Cold Springs reservoirs have exceedingly short holdover, with McKay in poorest condition.

Above average runoff will be needed next spring and summer to produce the water needed for fully satisfactory supplies for Eastern and Central Oregon. Only in the northwestern part of the state is the present outlook satisfactory.

Watershed soils in eastern Oregon are drier than for several years, especially in the southeast, and will require more "priming" than usual with rains or snowmelt water before main spring runoff begins.

Turning again to a review of streamflow behavior during this past irrigation season, in the northern part of Idaho it became obvious by May 1 that the snowpack had not begun to melt, and a substantial increase of snow water was also found on the May 1 snow measurements. This combination resulted in joint forecasts by the Soil Conservation Service and the U. S. Weather Bureau of moderate flood hazard for the flood plain of the Kootenai river below Bonners Ferry. This flood of moderate proportions occurred on the Kootenai river

bottoms near the middle of June, but because people were prepared, only 7000 acres were damaged. In general, forecasts in the northern part of Idaho were slightly low, and on the smaller rivers in southern Idaho, where antecedent snow survey records are scarce, the forecasts were slightly high. Outcome of some of the forecasts for which runoff figures are now available are shown in the table below.

Errors on April 1 were greater than usual because the snowpack continued to increase during the month of April. The maximum snowpack figures were not available until the May 1 snow surveys, whereas April 1 usually represents the maximum.

Stream	April-Sept. Runoff (Thous. Ac.Ft.)			Forecast Error	
	Forecasts			Percent	
	April 1	May 1	Actual	April 1	May 1
Columbia, Birchbank	38.5*	41.5*	43.47*	11	5
Columbia, Dalles	84.5*	91.5*	98.4*	14	7
Columbia, Dalles (Apr-Jn)	58.0*	62.0*	57.7*	1	7
Kootenai, Leonia	7,670.0	8,750.0	8,503.0	10	3
St. Joe, Calder	1,040.0	1,153.0	1,353.6	23	15
Salmon, Whitebird	4,900.0	5,500.0	5,748.0	15	4
Clearwater, Spalding	7,750.0	8,100.0	9,356.0	17	13
Snake, Heise	3,220.0	3,300.0	3,488.0	8	4
Boise, Boise	830.0	1,075.0	1,171.0	29	8

*These figures represent millions of acre feet.

Farm operators made excellent use of the 1955 water supply forecasts. On many streams lacking storage facilities or faced with severe water supply shortage, cropland acreage was reduced to conform with the water supplies

available. This resulted in savings of time and labor on land for which there was no water, and increased the usefulness of the short water supplies available for the remainder of the land.

Fortunately, the cool late spring with attendant valley precipitation eliminated the necessity for one to three irrigations and thereby saved stored water. However, in many cases the stored water ran out much earlier in the season than is normal and reductions in crop acreage or yield were experienced.

On the Salmon Falls tract near Twin Falls, for instance, it was estimated that farmers saved \$299,400 through not preparing their land for crops where there was forecast not enough water to mature a crop. The water saved by not pre-irrigating this area produced \$79,450 more crops on the land where it was eventually used because they were able to mature full crop production. Many other areas were in a similar position but estimates of savings are often difficult to make.



